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ON THE MODERN SCIENCE
OF ECONOMICS.



BY

HENRY DUNNING MACLEOD, M.A.

READ APRIL 20TH, 1887.

JOHN HEYWOOD,
DEANSGATE AND RIDGEFIELD, MANCHESTER;
AND 11, PATERNOSTER BUILDINGS,
LONDON.
1887.



MANCHESTER STATISTICAL SOCIETY.

On the Modern Science of Economics.

BY HENRY DUNNING MACLEOD, M.A.

Read April 20th, 1887.

IT is a matter of common notoriety that while economists, in this country at least, have during the last three-quarters of a century achieved a series of great successes, the science of Political Economy itself, or Economics as it may more aptly, and is now becoming more usually termed, is in a most unsatisfactory state; and, indeed, a very large number of persons deny that there is any intelligible science of Economics at all.

As a matter of fact, economists throughout the world are divided into two camps—one division holds that it is the science which treats of the production, distribution, and consumption of wealth; but the other division, which is now enlisting new adherents every day, and is gradually gaining the ascendancy throughout the world, defines it as the science of commerce or exchanges.

I shall show you a little further on that these two expressions originally meant exactly the same thing, and the main question which I shall submit for your determination is, which of these two expressions is the more suitable for the science in its state of development at the present day?

It is very commonly supposed that Adam Smith was the founder of political economy. A once-prominent politician is reported to have said that political economy and free trade sprang complete from the head of Adam Smith, as Minerva did from the

head of Jupiter ; but such ideas are wholly erroneous. Political economy was founded by a series of illustrious philosophers in France, in the middle of the last century, and it was they who devised the expression, *Production, Distribution, and Consumption of Wealth* ; and I shall show you that the present deplorable state of the science is due to modern writers having entirely misapprehended its original meaning.

But, at all events, all economists are agreed that their science treats exclusively about wealth, and that it is the science of wealth. We have then to inquire, What is a science ? and what is the science of wealth ?

What, then, is a science ? A science is a body of phenomena or facts, all based upon some single general idea or quality ; and it is a fundamental law of natural philosophy that all quantities whatever which possess that quality, however diverse they may be in other respects, must be included in that science ; and the object of the science is to discover and ascertain the laws which govern the phenomena, or govern the relations of the quantities of which the science consists.

If, then, economics is the science of wealth, the first thing to be done is to determine what that single general quality is which constitutes things wealth, then to discover all the various kinds of quantities which possess that single quality, and then to determine the laws which govern the relations of all these various quantities.

ON THE DEFINITION OF WEALTH.

And in submitting to your consideration the true definition of the word wealth, I hope that you will not think that I am going to amuse you with vain logomachy or curious speculation. On the contrary, this word is not only the basis of a great science, but there is none, probably, which has so seriously influenced the history of the world and the welfare of nations, according to the meaning given to it at various periods.

For many centuries the legislation of every country in Europe was moulded by the meaning of the word wealth. The eminent French economist, J. B. Say, says that during the two centuries preceding his time, fifty years were spent in wars directly originating out of the meaning given to this word.

Another economist, Storch, speaking of the mercantile system which prevailed so long, says, "It is no exaggeration to say that there are few political errors which have produced more mischief than the mercantile system. . . . It has made each nation regard the welfare of its neighbours as incompatible with its own : hence their reciprocal desire of injuring and impoverishing one another, and hence that spirit of commercial rivalry which has been the immediate or remote cause of the greater number of modern wars. . . . In short, where it has been the least injurious, it has retarded the progress of national prosperity : everywhere else it has deluged the earth with blood, and has depopulated and ruined some of those countries whose power and opulence it was supposed it would carry to the highest pitch."

So Whately says : "It were well if the ambiguities of this word had done no more than puzzle philosophers. . . . It has for centuries done more, and perhaps for centuries to come will do more, to retard the progress of Europe than all other causes put together."

Now, certainly, we may be very sure that no wars in future times will ever again be caused by the meaning of the word wealth. But for all that, is all danger over? Far from it. On the contrary, if possible, we are menaced with a more terrible danger still. Because that dread spectre of Socialism, which now threatens war and revolution to every country on the Continent, and from which this country is not entirely free, is entirely based, as the Socialists themselves say, on the doctrines of wealth put forward by Adam Smith and Ricardo.

These considerations, which are nothing but the literal truth, show you the gravity and the importance of the inquiry to which

I now invite you. I hope that this evening we may entirely clear away this reproach, and that the words I am going to say may not vanish from your minds as if they were written in sand on the seashore; but rather that they may be as if they were written with an iron pen, and graven on the rock for ever.

We have now, then, to search for that single general quality which constitutes things wealth.

More than two thousand years ago Aristotle said, " *χρήματα δὲ λέγομεν πάντα ὅσων ἡ ἀξία νομίσματι μετρεῖται :*"

By the term wealth we mean all things whose value can be measured in money.

Thus Aristotle makes exchangeability, or the capability of being bought or sold, to be the sole essence and principle of wealth. Consequently, everything which can be bought or sold is wealth, whatever its nature or its form may be.

Now, here we have a perfectly good general definition, which contains only one general idea, and which is therefore fitted to form the basis of a great science. This single sentence is, in fact, the germ out of which the whole science of economics is to be evolved, just as the huge oak tree is developed out of the tiny acorn.

We have next to discover how many distinct orders of quantities there are which can be bought and sold, or whose value can be measured in money, *i.e.*, possess the quality of exchangeability.

In the first place there are material things of a multitude of different kinds, such as land, houses, cattle, corn, money, &c., which can all be bought and sold, which every one now admits to be wealth.

There are, however, other kinds of quantities whose value can be measured in money, which we have now to consider.

ANCIENT DIALOGUE TO SHOW THAT LABOUR IS WEALTH.

There is a remarkable ancient work extant, which is, as far as I am aware, the earliest regular treatise on an economical question.

It is termed the "Eryxias," or "On Wealth." The purport of this dialogue is this. The Syracusans had sent an embassy to Athens, and the Athenians had sent a return embassy to Syracuse. As the ambassadors were entering the city, on their return from Syracuse, they met Socrates and a party of his friends, with whom they entered into conversation. Eryxias, one of the envoys, said that he had seen the richest man in all Sicily. Socrates immediately started a discussion on the nature of wealth. Eryxias said that he thought upon the subject as every one else did, and that to be wealthy meant to have much money. Socrates asked him what kind of money he meant, and he described the money of various countries. At Carthage they used as money leather discs, in which something was sewn up, but no one knew what it was, and he who possessed the greatest quantity of this money at Carthage was the richest man there; but at Athens he would be no richer than if he had so many pebbles from the hill. At Lacedæmon they used iron as money, and that useless iron. He who possessed a great quantity of this at Sparta would be wealthy, but anywhere else it would be worth nothing. In Æthiopia again, they used carved pebbles, which were of no use anywhere else.

Thus Socrates showed that money is wealth only in those places where it is exchangeable, or has purchasing power. In those places where it is not exchangeable, or has not purchasing power, it is not wealth.

Socrates then asked, "Why are some things wealth, and some things are not wealth?" "Why are some things wealth in some places and not in others, and at some times and not others?" He then showed that whether things are wealth or not depends entirely upon human wants and desires; that everything is wealth where it is wanted and demanded; and that it is not wealth where it is not wanted and demanded.

Socrates then showed that things are *χρήματα*, or wealth, only when and where they are *χρήσιμα*—that is, where they are wanted and demanded.

Thus, though some persons might be puzzled at the meaning of the word *wealth*, there is no possibility of mistake when we refer to the Greek, because *χρῆμα*, which is one of the most usual words for wealth in Greek, comes from *χράομαι*, to want or demand; consequently the word *χρῆμα*, or wealth, means simply anything whatever which is wanted and demanded, no matter what its nature or its form may be.

It is, then, human wants and desires which alone constitute anything as wealth: anything whatever which men want and demand, and are willing to pay for, is wealth, whatever its nature may be: anything which no one wants and demands is not wealth.

Socrates then showed that anything else which enables us to purchase what we want and demand is wealth, for exactly the same reason that gold and silver are.

He instanced professors and persons who gained their living by giving instruction in the various sciences. He said that persons got what they wanted in exchange for this instruction, just as they did for gold and silver; and consequently, he said, the sciences are wealth—*αἱ ἐπίσθημαι χρήματα οὔσαι*; and that those who are masters of such sciences are so much the richer—*πλουσιώτεροί εἰσι*.

Now, in instancing the sciences as wealth, that of course is a general term for labour, because labour, in economics, is any exertion of human ability, or thought, which is wanted, demanded, and paid for. Now, labour or thought cannot be seen or handled, but it can be bought and sold: its value can be measured in money, and therefore, by Aristotle's definition, it is wealth.

Socrates, in this dialogue, shows that the mind has wants and demands as well as the body, and that the services which are wanted and demanded by the mind, and are paid for, are equally wealth, as those material commodities which satisfy the wants and demands of the body and are paid for.

Thus Socrates shows that personal qualities are wealth, and a person makes an income by the exertion of his skill and labour

as an advocate, a physician, an engineer, or the manager of a great company, just in the same way as another person makes an income by selling material commodities.

DEMOSTHENES SHOWS THAT PERSONAL CREDIT IS WEALTH.

But personal qualities may be used as purchasing power in another way besides that of labour. If a merchant enjoys good "credit," as it is termed, he may go into the market and buy goods, not with money, but by giving his promise to pay money at a future time—that is, he creates a right of action *or claim* against himself. The goods become his actual property, exactly as if he had paid for them with money—in fact, this right of action is the price he pays for them, and this right of action is termed a credit, because it is not a right to any specific sum of money, but only a general right against the person of the merchant to demand a sum of money at some future time.

Hence a merchant's credit has purchasing power exactly as money has. When a merchant purchases goods with his credit, instead of with money, his credit can be valued in money exactly as his labour may be; and therefore, by Aristotle's definition, personal credit is wealth; and so also Demosthenes says—
Δνοῖν ἀγαθοῖν ὄντων πλούτου τε καὶ τοῦ πρὸς ἅπαντας πιστεύεσθαι, μείζον ἐστὶ τὸ τῆς πίστεως ὑπαρχον ἡμῖν.

There being two kinds of property, money and general credit, our greatest property is credit.

Also he says—*Εἰ δὲ τοῦτο ἀγνοεῖς ὅτι πίστις ἀφορμὴ τῶν πασῶν ἐστὶ μέγιστη πρὸς χρηματισμὸν, πᾶν ἂν ἀγνοήσεις.*

If you did not know this, that credit is the greatest capital of all towards the acquisition of wealth, you would be utterly ignorant.

Thus, Demosthenes shows that personal credit is ἀγαθὰ, or goods and chattels and ἀφορμὴ, or capital.

Thus, though credit, like labour, cannot be seen, nor touched, nor handled, yet it may be bought and sold, or exchanged—its value can be measured in money, and therefore it is wealth.

Thus it is now clearly shown that personal qualities, both in the form of labour of all kinds, and also in the form of the credit of our merchants and traders, of all sorts, is national wealth, and it also follows that the credit of the state itself is also national wealth.

ALL JURISTS SHOW THAT RIGHTS ARE WEALTH.

But there is yet another order of quantities which can be bought and sold, or exchanged, and whose value can be measured in money, and which are therefore wealth by the definition, and it is to this order of quantities that I would specially direct your attention, because it is in respect of them that modern economists are chiefly at fault, and it is with them that the most important questions in modern economics are chiefly concerned.

Suppose that I pay a sum of money into my account with my banker. What becomes of that money? It becomes the absolute property of my banker. I transfer to him the absolute property in the money. But I do not make him a present of it. I get something in exchange for it. And what is that something? In exchange for the money my banker gives me a credit in his books—that is, he gives me a right of action to demand an equal sum of money from him at any time I please.

This right of action is termed a credit, and it is the price the banker pays for the money; and if I write that right of action down on paper in the form of a cheque, that cheque may circulate in commerce and effect exchanges, exactly like so much money, until it is paid off and extinguished.

So also, if a merchant buys goods on credit, by giving in payment for the goods a right of action against himself to demand so much money at a future time, that right of action is the payment for the goods, and the owner of it may write it down on paper in

the form of a bill of exchange ; and that bill of exchange may circulate in commerce and effect exchanges exactly like so much money until it is paid off and extinguished.

Thus a right of action written on paper, in the form of a cheque or a bill of exchange, is itself an independent exchangeable article of property, or a vendible commodity, and may be bought and sold exactly like a piece of money, or a house, or a watch, or any other material commodity.

These rights of action are termed credit, because they are not a title to any specific sum of money, but they are merely abstract rights to demand a sum of money from a debtor ; and anyone who buys them does so only because he has the belief, or confidence, or trust, that the debtor can pay them at the proper time.

It will also be convenient to state here that they are also called debts. To go into the whole question of credit and debt would be too long here ; but it must be sufficient to state that the words credit and debt are used perfectly indiscriminately in English law and common usage to mean the creditor's right of action to demand a sum of money from a person.

But there are a great many other kinds of abstract rights which receive different names according to the subject to which they refer, which may all be bought and sold, and are therefore also vendible commodities.

Suppose that the state wants money for some public purpose, such as a great war or to execute some public work. It buys money from any person who is willing to sell it to it, and in exchange for the money it gives the subscribers certain rights to demand a series of future payments from the nation. These rights, in popular language, are termed the funds or consols ; and the public creditors may sell these rights to any one else they please. These rights may be bought and sold like any material commodity. They are vendible commodities, and therefore wealth by the definition. Suppose that any person wishes to subscribe to the capital of a public company—banking, railway, canal, dock, or

any other. The money he pays becomes the absolute property of the company, as a distinct person in its corporate capacity, and in exchange for the money he receives certain rights to share in the future profits to be made by the company. These rights are termed shares, and the shareholder may sell his rights to any one else. These shares may be bought and sold like any material chattels. They are vendible commodities, and therefore wealth by the definition.

Suppose that a trader establishes a successful business of any sort. Besides the house or premises in which the business is carried on, and the material goods in his shop, he has the right to receive the future profits to be made by the business. This abstract right is termed the goodwill of the business, and the goodwill is part of the trader's assets, over and above the material goods in the shop, and he can sell it for money to any one else. It is a vendible commodity, and therefore wealth.

So when an author publishes a work, he has the exclusive right of publishing that work, and receiving the profits made by it for a certain time. That right is termed copyright, and is a property quite separate from the printed volumes of the work. And the author may sell that copyright to anyone he pleases like a material chattel. It is therefore a vendible commodity, and wealth by the definition.

There are also a considerable number of other abstract rights, of a similar nature, which it would be too long to enumerate, because I do not want to enumerate every separate right, but to call your attention to a particular class of saleable quantities.

Now all these rights of various sorts cannot be handled, nor seen, in that form, but they can all be bought and sold, their value can be measured in money, and therefore they are all wealth.

But all these rights may be written down on some material, such as paper or parchment; and then they may be transferred by manual delivery, like any other material commodity—like money or any other goods.



And because all these rights can be bought and sold, because their value can be measured in money, all jurists expressly class them under the terms "wealth," "goods," "goods and chattels," or "vendible commodities."

Thus in the great code of Roman law named the Pandects it is laid down as a fundamental definition: "*Pecuniæ nomine non solum numerata pecunia, sed omnes res, tam soli quam mobiles, et tam corpora quam jura continentur.*"

Under the term wealth, not only ready money but all things both immovable and movable, both corporeal things and rights, are included.

Also "*Rei appellatione et Causæ et Jura continentur.*"

Under the term property both rights of action and rights are included.

"*Æque bonis adnumerabitur si quid est et actionibus.*"

Rights of action are justly reckoned under the term goods and chattels.

So the eminent jurist Ulpian says: "*Nomina eorum qui sub conditione vel in diem debent et emere et vendere solemus. Ea enim Res est quæ emi et venire potest.*"

We are accustomed to buy and sell debts payable at a certain event or on a certain day, for that is wealth which can be bought and sold.

So Colquhoun, in his "Summary of Roman Law," says that under the term *Merx* is included anything whatever which can be bought and sold, no matter whether it is movable or immovable, corporeal or incorporeal, existent or nonexistent, such as a horse, or a right of action, servitude, or thing to be acquired, or the acquisition where it depends on chance.

Thus I have shown you that in Roman law abstract rights of all sorts are included under the terms *pecunia* (wealth), *bona* (goods and chattels), *Res* (property), and *merx* (merchandise).

The Pandects were published in the year 530 A.D., at Constantinople, but while the official language was Latin, the

people were Greek, consequently the Latin Pandects very soon fell into desuetude. They were superseded by Greek translations, and treatises, and at last, in the ninth and tenth centuries, under the Basilian dynasty, they were entirely superseded and set aside as obsolete. A new digest or revised code was published in Greek, called the Basilica, which has remained to the present day as the common law of all the Greek population in the East.

And in the Basilica these definitions of wealth are repeated: Τῷ ὀνόματι τῶν χρημάτων οὐ μόνον τὰ χρήματα, ἀλλὰ πάντα τὰ κινητὰ καὶ ἀκίνητὰ, καὶ τὰ σωματικὰ καὶ τὰ δίκαια δηλοῦνται.

Under the term *χρήματα* or wealth, rights are included. Also, *τῇ τοῦ πράγματος προσηγορίᾳ καὶ Αἵτιαι καὶ δίκαια περιέχεται*: Under the term goods and chattels, rights of action and rights are included. So in Greek law, abstract rights are included under *ἀγαθὰ* (goods), *οὐσία* (estate), *ἀφορμὴ* (capital); and they are termed *οὐσία ἀφάνης*, invisible wealth.

It is exactly the same in English law. In the old law of Normandy it is expressly said that rights of action are included under the term chattels. It was resolved in a case in the time of Elizabeth that personal actions are included under the word goods in an Act of Parliament. So in a well-known case it was said, "But goods and chattels include debts." Things in action are considered as "goods and chattels."

Every tiro in law knows perfectly that it is laid down in every elementary text-book of English law that pure abstract rights are termed goods and chattels, personal chattels, incorporeal chattels, and incorporeal wealth.

Thus in every system of jurisprudence in the world, Roman, Greek, and English, abstract rights of all sorts—debts, rights of action, bank notes, bills of exchange, the funds, shares in commercial companies, copyrights, patents, &c.—are termed *pecunia*, *res*, *bona*, *merx*—*χρήματα*, *πράγματα*, *ἀγαθὰ*, *οὐσία*, *ἀφορμὴ*—goods, chattels, vendible commodities, and wealth.

I have now shown you, as I said before, that for the space of 1,300 years the ancients unanimously held that exchangeability is the sole essence and principle of wealth: that everything is wealth which can be bought and sold, or exchanged, or whose value can be measured in money. They also showed that there are three distinct orders of quantities which possess the quality of exchangeability, or which can be bought and sold, namely, material things, services or labour, and abstract rights.

And reflection will show that there is nothing which can be bought and sold which is not of one of these three forms—either it is a material chattel, or it is a service of some kind, or it is an abstract right.

I have now, then, shown you that there are three, and only three, orders of exchangeable or economic quantities, and you will at once see that these can be exchanged in six different ways:—

1. A material thing can be exchanged for a material thing, as when gold money is exchanged for corn or jewelry.

2. A material thing can be exchanged for labour, as when gold money is paid for labour.

3. A material thing can be exchanged for a right, as when gold money is given to purchase a bill of exchange, shares, or the goodwill of a business, a copyright, &c.

4. Labour can be exchanged for labour, as when two persons agree to render each other services.

5. Labour can be exchanged for a right, as when wages are paid in bank notes or cheques.

6. A right can be exchanged for a right, as when a banker discounts a bill of exchange, by giving a credit in his books that he buys one right by giving another right.

And these six distinct kinds of exchange constitute the science of exchanges, or of commerce in its widest extent, and in all its forms and varieties.

And if any of the great Roman lawyers, with the materials he had before him, had ever conceived the idea of constructing a

complete scientific exposition of the mechanism of the mighty system of commerce, the science of economics would have been 1,500 years in advance of its present state, and it would have saved centuries of misery, bad legislation, and bloodshed to the world.

Now, the law which regulates the exchangeable relations of these quantities is called the law of value; and the least acquaintance with the principles of natural philosophy shows that there can only be one grand general law of value, which governs all exchanges in all their multiplicity and complexity.

And I will now complete this part of the subject by bringing before you the doctrine which is the basis of the theory of credit, and of all other kinds of incorporeal property. It is this: that every future profit, from whatever source it arises, whether from land or from personal industry, has a *present value*; and that present value can be bought and sold, or can be measured in money, and therefore, by the definition which the ancients unanimously held for 1,300 years, that present right, or the present value of the future payment, is itself an independent article of wealth, quite separate and distinct from the future payment itself.

Thus a bank note or a bill of exchange is simply the right to a future payment, and every one knows that bank notes and bills of exchange circulate and are exchanged in commerce, by hundreds of millions, quite independently of the money they may ultimately be paid in; and in fact, in modern commerce, bank notes and bills of exchange are very rarely paid in money at all, but by other methods which are too long to explain here.

So shares, copyrights, the funds, the goodwill of a business, patents, &c., are all simply rights to future payments or profits; and they are sold quite separately from those future payments or profits.

It is thus seen that ancient writers possessed the true scientific instinct. They unanimously fixed on one single general quality,

namely, exchangeability, or the capacity of being bought and sold, as the sole essence and principle of wealth. They then searched out and discovered all the distinct orders of quantities which possess that quality, and they include them all under the terms *pecunia, res, bona, merx*—ἀγαθὰ, πράγματα, χρήματα, οὐσία, &c., or wealth, property, goods and chattels, or commodities.

And when we see that the great problem in the science is to discover the single general law, which governs all their variable relations, anyone with the slightest mathematical feeling can at once perceive that we have here the materials of a great mathematical science, because we have a distinct order of variable quantities, and it is perfectly clear that the same general principles of reasoning must govern the relations of this order of variable quantities that govern the relations of all other variable quantities.

We must now bid adieu to those halcyon days when all the world was unanimous, and pass through centuries of war and controversy, till we shall find that at last modern economists have come to the same doctrine as the ancients.

ON THE MEANING OF WEALTH IN MODERN TIMES.

We have now to investigate the meaning of wealth in modern times, and I must ask you to pretend to forget all that I have already said, because it was totally unknown until I brought it to light.

For many centuries money was held to be the only wealth. Men saw that money could purchase everything—that while most other things decayed away and perished money remained. Every nation held it to be of the greatest importance to accumulate as much money as possible. For centuries the legislation of every country in Europe was moulded to encourage the importation and to prevent the exportation of money as much as possible.

From the doctrine that only money is wealth, it naturally followed that what one side gained the other lost. And this idea

was held by the wisest statesmen, and was the cause of innumerable commercial wars for centuries.

At last, however, somewhere about the end of the 17th century, men began to see the folly of holding money to be the only wealth, and the word was extended to mean all the material products of the earth which conduce to the comfort and welfare of mankind.

During all this time there were a few farsighted spirits who saw through the fallacy of the whole thing, and advocated freedom of trade between countries, but they were solitary lights shining in darkness, and the darkness apprehended them not. But in this brief outline I must pass over their names, because though they advocated freedom of trade as a good thing, none of them ever perceived that there is such a thing as a definite positive science of economics.

ORIGIN OF POLITICAL ECONOMY IN MODERN TIMES.

I will now relate the circumstances which gave rise to a sect of illustrious philosophers who founded economics as a science.

In 1721, John Law's theory of paper money had been tried in France, and produced that terrible catastrophe which you all know by the name of the Mississippi scheme.

And here I may make a few passing remarks upon Law. It is too often the custom to regard him as a mere rogue and swindler and charlatan, but that is a most profound error. He was the ablest and most profound financier of his age. When France was in the lowest depths of misery at the death of Louis XIV., he addressed a series of fifteen letters on credit and banking to the Regent Orleans, which show an infinitely greater knowledge of the subject than any other writer of his day possessed.

In 1718 he was allowed to found the Bank of Paris, and in three years he had restored the country to such a state of prosperity that foreign nations sent ambassadors to congratulate the Regent.

With regard to the principles of mere credit he was perfectly sound. But he saw that the powers of credit are limited, and he conceived the unfortunate idea of issuing a paper money based upon land beyond the limit of credit. He maintained that if an inconvertible paper money were issued upon land to the amount of twenty years' purchase, it would maintain a par value with specie. He had previously brought his plan before the Scotch Parliament, in 1705, but they, with a wise instinct, rejected it. Having, however, achieved such marvellous success with his bank, he was allowed and urged to carry out his scheme of paper money, with the result so well known.

In speaking of Law, then, you must always remember that his exposition of banking and credit and his scheme of paper money are two totally distinct things. Nor was his scheme of paper money a mere swindle, as is so often thought; on the contrary, it is founded on a definite theory which he has fully explained. Unfortunately the theory is entirely erroneous, and it is quite easy to show that the consequences must necessarily have resulted from it.

His ideas are so far from being dead and gone that they have plenty of believers at the present day. The Bank of England is partly founded on Lawism. The fifteen millions of notes which the Bank is allowed to issue against public securities is an example of pure Lawism. The first increases of the National Debt were all loans from the Bank, which was on each occasion allowed to issue an increased amount of notes to an equal extent. If that principle had been carried out to the present day, we should have had a National Debt of eight hundred millions, and also eight hundred millions of notes, which I need hardly say would have landed us in as great a catastrophe as the Mississippi scheme.

Many eminent bankers at the present day advocate the issue of notes on public securities. Let me assure them that they are true disciples of Law. This was tried on a large scale in America in 1837-8-9, and the result was that in 1839 every bank in America

stopped payment. The fact is that issuing notes upon land and upon public securities are identically the same in principle; and if only pushed far enough lead to the same results.

Let us now, however, resume the thread of our discourse. The Mississippi catastrophe first turned the attention of Turgot, then a very young man, to economics, but that was far from being the only circumstance. It is scarcely possible to realise the picture of the misery of the French people, given by contemporary writers, from the effect of the wars of Louis XIV., the grinding system of taxation, and the feudal privileges. Each province was a separate jurisdiction fenced round with custom-houses, so that there was no freedom of internal commerce: the minutest process of every manufacture was regulated by law; and on the slightest infraction of these regulations the manufactures were destroyed by the Government inspectors. The greater part of the world was sunk in slavery, and the slightest disrespect of the ecclesiastical authorities was punished with breaking on the wheel.

It was in 1750 that a sect of illustrious philosophers, Turgot, Quesnay, and many others directed their attention to these things, and they maintained that there is a science of natural right, and that the misery they saw around them was caused by the violation of this natural right. They maintained that there is a science of the relations of men towards the State, towards each other, and towards property. In 1759 they published a code of doctrine in which they declared that freedom of person, freedom of opinion, and freedom of commerce or exchange, are the natural rights of mankind, and they also declared the fallacy of the doctrine of the balance of trade. This science they termed political economy.

It was the economists then who first declared that there is a science of political economy, and not merely advocated freedom of trade as a beneficial thing, but proclaimed it as the natural right of mankind. It was they who devised the expression, "production, distribution, and consumption of wealth," and I

must ask your earnest attention to the meaning of that expression as explained by its originators.

They defined the term "wealth" to be the material products of the earth which are brought into commerce and exchanged, and those only. The products which the owners consumed themselves they termed *Biens*; those only which they exchanged away they termed *Richesses*.

Hence, as the ancients did, the founders of economics in modern times held that exchangeability is the essence of wealth as a technical term. But they restricted it to *material* products. They refused to admit that labour and credit are wealth, because they said that to do that would be to admit that wealth can be created out of nothing, and they constantly repeated *ex nihilo nihil fit*. They therefore held that the earth is the sole source of wealth.

Now, it is contrary to the laws of natural philosophy to admit that exchangeability is the principle of wealth, and then to restrict it to material products. Bacon repeatedly points out that when you have once settled upon the principle or quality which is the basis of a science, you must search for and include all quantities whatever, however diverse their forms may be, which contain that quality, and as labour and credit are both exchangeable, it is contrary to the laws of natural philosophy to exclude them from the term wealth.

I will now explain the meaning of the expressions "Production," "Distribution," and "Consumption" of wealth.

They defined Production to be the obtaining the raw produce from the earth and bringing it into commerce and offering it for sale.

But this raw produce is seldom fit for immediate use; it has to undergo several intermediate processes of manufacture and transport before it is brought to the person who ultimately purchases it.

All the persons engaged in these intermediate processes they termed *Distributors*.

The person who finally purchased the finished product for use and enjoyment, and took it out of commerce, they termed the *Consommateur*; because *consommer* in French means to complete or terminate, and the purchaser is the person who completes the transaction.

The whole transaction—the bringing the produce into commerce, the various changes of form and place it underwent, and its final purchase for use, or *consommation*—the economists termed *Commerce* or *Exchange*.

An exchange, however, may take place between two parties; and distribution was often used as equivalent to *consommation*. Consequently, “production, distribution, and consumption,” “production and distribution,” “production and consumption,” were all equivalent expressions, and never meant anything else, as explained by the economists, than *Commerce* or *Exchange*.

Production and consumption never meant anything but supply and demand, and supply and demand constitute commerce or exchange.

Thus the expression “production, distribution, and consumption” is one and indivisible, and it must not be separated into its component parts.

Now, this is the whole point in the contest between the modern schools of economists—considering that these two expressions, “production, distribution, and consumption” of wealth, and *Commerce* or *Exchange*, were absolutely equivalent at their first use, which is the better conception for the science at the present day, in its enlarged state.

Even supposing that the term “wealth” is to be restricted to material things, a difficulty arises with respect to the first expression. The land itself is a saleable commodity; and how are we to speak of the “production, distribution, and consumption,”

of land? whereas it is quite usual to speak of the "supply and demand" of land. Thus, even if wealth were restricted to material things, the second expression is wider and more intelligible.

In fact, the first expression imposes a cast-iron limit on the subject, and it was intended to do so—there is no expansiveness on it; while the second expression is expansive, and includes all commerce in its widest extent.

The first economists were highly cultivated men, and had wide and philosophical views, but they had no practical experience of commerce. While, therefore, they perceived the national advantage of freeing commerce from all restraint, they never made any attempt to exhibit its actual mechanism.

They refused to admit that credit is wealth, but many other contemporary writers did.

The first writer in modern times who agreed with Demosthenes in designating credit as wealth, was that acute metaphysician Bishop Berkeley. In his "Querist" he has many searching queries on economics; one is "Whether power to command the industry of others (*i.e.*, credit) be not real wealth?" So all mercantile writers, contemporary with the economists, seeing that credit has exactly the same purchasing power as money, expressly class credit as wealth. So Junius says, "Private credit is wealth."

PHYSIOCRATE DOCTRINE OF PRODUCTIVE LABOUR.

I have now to direct your attention to a remarkable doctrine of the economists, which was, as I shall show, the cause of Smith's work.

They defined productive labour to be labour which left a profit after all expenses were defrayed. They maintained that agricultural is the only form of productive labour, *i.e.*, that leaves a profit; and that profit they termed *produit net*, and held to be the only revenue of the State.

They alleged that in commerce it is always an exchange of equal values, and, therefore, that there is no profit on either side.

They admitted that manufactured articles are of greater value than the raw material, but they said that that increased value only replaced the maintenance of the workmen ; and so that, upon the whole, there was no increase of value or of national wealth.

They maintained, therefore, that the agriculturists are the only class of productive labourers, and that all others are sterile or unproductive ; and that as the whole revenue of the State consisted of the *produit net* of land, that all taxation should be laid on the rent of land.

From these doctrines they drew the astounding conclusion, that neither commerce nor manufactures can enrich a nation.

While, therefore, the doctrine before the economists was that what one side gained in an exchange the other side lost, they alleged that in an exchange neither side gains.

Now, the economists deserve this praise at least : in all their reasonings they strictly defined their terms, and there was no possibility of mistaking their meaning.

When they stigmatised all classes, except the agriculturists, as sterile and unproductive, it aroused a most powerful reaction against them ; and when the consequence of their doctrine, that in an exchange neither side gains, led to the paradoxical conclusion that neither commerce nor manufactures can enrich a nation, so contrary to the plainest facts of history, a host of writers in all countries rose up against them, and men of intelligence began to inquire whether it is true that in an exchange neither side gains.

It was these doctrines which were the real origin of Smith's "Wealth of Nations."

It has, indeed, been said that Smith taught at Glasgow the same doctrines that he afterwards published in his work. But not a line of Smith's teaching is in existence. It may possibly be true that he advocated freedom of trade at Glasgow, but there were numbers of other writers who did the same.

In 1763 Smith travelled abroad as tutor to the young Duke of Buccleuch, and became acquainted with the economists, at Paris,

then in the height of their fame. In 1766 he returned to Kirkcaldy, his native place, and spent ten years in the composition of his work, which was published in 1776. Thus you see that it is quite erroneous to suppose that Smith was either the founder of political economy or the originator of free-trade. The code of the economists was published in 1759, of which free-trade was a cardinal principle. Smith's work was not published till 1776.

In the same year Condillac, the well-known metaphysician, published a work entitled "*Le Commerce et le Gouvernement*," written on much the same plan, and with the very same object as Smith, namely, to prove that in an exchange both sides gain; but his proof is not very satisfactory. Smith alone proved, by irrefragable reasoning, which, of course, is far too long and intricate to explain here, that in commerce both sides gain, and, of course, as the necessary consequence, that commerce and manufactures both enrich a nation, and therefore that those who engage in them are productive labourers.

Perhaps you may think that the doctrine is so plain that it needs no proof; but that is far from being the case. At the time Smith proved it, it was a perfect paradox, contrary to the universal opinion of centuries. It is now the very corner-stone of economics, and it made a complete change in the policy of nations, because the doctrine formerly held was the cause of commercial wars for centuries, while Smith's doctrine showed that every nation is interested in the prosperity of its neighbours.

And that is one of Smith's titles to immortal fame.

He does not call his work a treatise on Political Economy: he entitles it "An Inquiry into the Nature and Causes of the Wealth of Nations." But most unfortunately he never gives throughout the whole course of it any clear idea of what he means by wealth.

But in the early part he speaks of the real wealth of a country as being the "annual produce of land and labour."

We have now to examine whether such a definition can be accepted as the basis of economics as a great science.

In the first place, it is to be observed that he has omitted the quality of exchangeability from the definition which the economists expressly insisted upon.

Now, it is perfectly obvious that the mere definition of wealth as the "annual produce of land and labour" cannot be accepted as a suitable definition of the term, because, if it were so, every useless work done would be wealth. If one were to build a pyramid on the top of Ben Nevis, would that be wealth? The simplest form of the "produce of land and labour" are children's mud pies. So that if we accept that definition simply, the way to augment the wealth of the country would be to set all the dirty children in it diligently to make mud pies.

The medium price of an acre of land near the Bank of England or the Royal Exchange is about a million sterling. Is not that land wealth? And how is that land itself the "produce of land and labour?"

Further on, Smith classes the natural and acquired abilities of the inhabitants as fixed capital, and he treats labour as a vendible commodity, and has a long discussion on the price of labour or wages. Now, how are the "natural and acquired abilities" of the people the "annual produce of land and labour?" And how is labour itself the "annual produce of land and labour?" Thus, you see that Smith has already broken away from the dogma of the economists, who carefully excluded labour from the term wealth.

After, for several hundred pages, filling the minds of his readers that wealth is simply the produce of land and labour, he admits that unless a thing is exchangeable it is not wealth. Thus, after all, he admits that exchangeability is the real essence and principle of wealth.

Further on, under the term "circulating capital," he enumerates bank notes and bills of exchange. Now, bank notes and bills of exchange are credit; they are mere rights of action. Thus you

see that Smith expressly includes credit under the term "wealth," which was what the economists expressly denied.

Now, how are bank notes and bills of exchange—mere rights of action—the "annual produce of land and labour?"

You will thus see that Smith extended the domain of economics: while the economists restricted it to the commerce of the material products of the earth, Smith extended it to include the commerce of labour, which he has discussed at great length. He also admitted that bank notes and bills of exchange are capital, but he never gave any exposition of the great scientific principles and mechanism of the general system of credit. He also says that the object of his work is to investigate the principles which regulate the exchangeable value of commodities.

Thus, you see, that the subject matter of Smith's first two books is, in reality, a treatise on commerce, or the theory of value; and his editor, McCulloch, says in his note, this science might be called the science of Values.

Condillac, who published his work in the same year, calls his first book "*Le Commerce*: or, the Principles of Economic Science."

Forbonnais, who was an eminent contemporary of the economists, published the best treatise on commerce of his day, and he calls it "Economic Principles."

Thus all contemporary writers perfectly well understood that though the economists bent their efforts to free commerce from its impediments, economics itself is the science of commerce or exchanges.

No doubt Smith did immense service to economics by demonstrating that in commerce both sides gain, and by extending its domain; but the fatal defect of his work is that the former part is entirely founded upon labour and materiality as being the essence of wealth, and the latter half adopts exchangeability pure and simple. It is also totally wanting in unity of principle and consistency of doctrine. As has been said, it is wanting in backbone.

RICARDO.

Ricardo was the first economist in this country who perceived the necessity of reducing the laws of value to general principles. He calls his work "The Principles of Political Economy and Taxation." But the part relating to political economy is nothing but a treatise on prices or on value.

But unfortunately it is not a treatise on the complete theory of value, but only on a very small part of it. He deals only with the value of material things, and only with a certain part of them—those only which are the produce of human labour. Having then excluded everything from consideration except material things produced by human labour, he lays down the dogma that labour is the foundation of all value. This doctrine has been repeated by numerous writers, and it is the doctrine, coupled with the incautious statement at the beginning of Smith's work, that the real wealth of a country is the "annual produce of land and labour," which, as the Socialists themselves allege, is the foundation of their system. They constantly maintain that working men are the creators of all wealth.

Considering the enormous importance which the subject has acquired, it is necessary to examine the truth of the doctrine that labour is the cause of all value.

Labour certainly is associated with value in some material things, but is it associated with value in *all* material things? I have already shown you that the space of ground upon which a great city is built has enormous value, but is that value the result of labour?

Look, again, at the great cattle of the field, and flocks and herds of all sorts; they are wealth, but are they the creation of human labour?

McCulloch says that if an object is the free gift of nature it cannot have the smallest value.

Test this doctrine by facts. In the Midland counties of England there are many oak trees which are worth £100 as they stand on the ground before anyone has touched them. Is their value due to labour? It is stated that in 1810 an oak tree was cut down at Gelenas, in Monmouthshire, the wood of which sold for £670, and the bark for £240. Was that value due to human labour?

Some years ago a whale was cast ashore on the beach of the Firth of Forth, and it sold as it lay there for £70. Was its value due to labour?

Some years ago it used to be the fashion for European ladies to imitate their swarthy sisters of Central Africa, and pile huge mountains of hair, termed chignons, on their heads. While this rage lasted a young girl's hair sold for £5, £10, and £20, and even much higher sums. Was the value of the girl's hair due to labour?

These and innumerable other cases which might be cited show that it is utterly erroneous to assert that labour is the cause even of the value of material things.

But labour itself has value. If, then, labour is the cause of all value, what is the cause of the value of labour?

Again, take a Bank of England note, or a great merchant's acceptance for £1,000. It has value. But is its value due to labour?

When a banker discounts a bill for a customer, he gives him a credit in his book for it—that is, he buys one right of action by creating another right of action, and by so doing he gives value for it. Is the value of the banking credit due to labour?

As the strict logical conclusion of his doctrine that labour is the cause of all value, Ricardo maintains that air, heat, and water add nothing to the value of the crops. If this doctrine be true, it would follow that if we were to plant a vineyard in Shetland, the grapes, if they ever appeared, and the wine made from them,

would have exactly the same value as the grapes and the wine produced in the vineyards of sunny France.

I am not aware whether any of those whom I have the honour of addressing have ever paid much attention to the doctrines of Ricardo. By some persons, indeed, he is regarded as an authority not to be questioned; but when I bring these doctrines plainly before you in the light of day, I feel sure that you, as men of business, will perceive that they are entirely erroneous.

Why has a bank note or a bill of exchange value? Because it is exchangeable—because it will be paid at the proper time. I have already shown you that the author of the “Eryxias” saw that money only has value when it is exchangeable. A bank note and money, then, have value for exactly the same reason—because they can be exchanged away for other things.

Why have cattle, flocks, herds, timber trees value? Because there is a demand for them. If all persons were to become Vegetarians, the value of cattle, herds, flocks, &c., would at once die off. What gives value to the vineyards of France, California, and Australia? The demand for wine. If the whole world were to become teetotallers, all value would at once die off from the vineyards of France, California, and Australia.

Thus you see that it is utterly erroneous to assert that labour is the cause of all value. Value manifestly proceeds from demand. All the labour in the world cannot confer value on anything when there is no demand for it. If all the warehouses in Manchester were groaning with goods, and no one came to buy them, where would their value be?

You will at once perceive the importance of these obvious truths; for they at once cut away the ground from that dreaded Socialism which is such a disturbing force at the present day. Read their own utterances, read that mass of incomprehensible jargon Karl Max’s “Capital,” and you will see that all the claims of the Socialists are founded on the exploded doctrines of Smith and Ricardo—that labour is the cause of all value, and that

working men are the creators of all wealth. Is it working men who create the great cattle of the field, or the trees of the forest? Did working men create corn, or did they make it grow? Did working men create the great sciences which have done so much for mankind, and by which so much of their labour is directed? Did working men create the skill of our advocates, or physicians, and other professional men? Did working men create the skill, and the foresight, and the personal credit of our great merchants and bankers, by whom the infinitely greater part of modern commerce is carried on?

The very labour of the working man himself has no value unless there is a demand for it.

Thus you see of what supreme importance it is to rectify the fundamental ideas of economics, and what boundless mischief rash statements produce when repeated by incautious men.

The last writer I need cite here is Whately. In his lectures as professor at Oxford, he points out the inconvenience of the name of political economy. He points out that Smith's name for his work only indicates the subject matter, and not the science itself. He points out that it has only to do with things so far as they are subjects of exchange. He therefore proposed to designate it as Catallactics, or the science of exchanges.

You will now observe that up to this time it was perfectly well understood by all economists that, as a positive science, economics is the science of commerce, or of exchange, or the theory of value. The expression *production, distribution and consumption of wealth*, was an extremely awkward one, but still its originators clearly explained that they meant nothing but commerce or exchange by it. Numerous other writers had simply defined it as the science of commerce; and so long as there was a general agreement as to its fundamental nature there was good hope of progress, because the ideas of its founders could be expanded, modified, developed, and rectified.

It is well known that almost every one of the other great sciences, Astronomy, Optics, Heat, Chemistry, and so on, have undergone great revolutions of opinion, modification, rectification, and expansion, and have thus been progressive sciences. And so it might have been at the present day with economics, if economists had steadily kept in view the original conception of the science. The first school of economists considered only the commerce in the material products of the earth. Adam Smith devoted great attention to the commerce of labour, but with the exception of a few perfunctory remarks on bank notes and bills of exchange he does not seem to have the slightest idea of the magnitude and importance of the commerce in rights, which is the most colossal branch of commerce at the present day, and includes the whole principles and mechanism of credit, banking, and the foreign exchanges.

Now you will at once perceive that so long as it was clearly understood that economics is the science of commerce in general, it was perfectly easy to introduce any new branch of commerce which had not been fully developed.

Now, if the early economists had reflected on the nature of the commerce in rights, if they had observed that Smith himself classes bank notes and bills of exchange as circulating capital, they would have seen that exchangeability is the sole essence and principle of wealth; they would have seen the absolute necessity of discarding labour and materiality as necessary to value; and they would never have given rise to Socialism by maintaining such erroneous doctrines.

It is quite evident that under the general term of commerce it is quite as easy and natural to treat of the commerce of rights as to treat of the commerce of material products or of labour.

THE SECOND SCHOOL OF ECONOMISTS.

Unfortunately, an economist of the highest distinction introduced a fatal change in the fundamental conception of the science,

which has thrown it into utter confusion, and has arrested its progress up to the present time, but from which all the most independent economists in the world are now emancipating themselves.

All interest in political economy died out among our bright but fickle neighbours in 1776, when Turgot was driven from power. Condillac's work, which was published in that year, never attracted the slightest attention.

In 1803, J. B. Say published his first treatise on political economy, in which he defined it as the *production, distribution, and consumption of wealth*, but unfortunately he quite departed from the original meaning of that expression, which was one and indivisible, and meant nothing but commerce or exchange.

J. B. Say broke up the expression into its separate terms, and completely changed the original meaning of production and consumption; for while the original meaning of production was offering for sale, and *consumption* meant simply purchasing, J. B. Say used production to mean adding value to anything and consumption to mean the destruction of value. He also has separate and independent chapters on production, distribution, and consumption.

Now, if you will think for an instant, you will see that so long as you retain commerce as the fundamental concept of economics, it is a positive, distinct, and intelligible science, the fundamental law of which is the law of value. But when you break it up into three parts, you will see that it becomes utterly unintelligible as a distinct science. It breaks the back of the whole science: it utterly breaks the back of the theory of value.

I will now show the awkwardness of adopting that view of the science.

Say himself designates instruments of credit, such as bank notes and bills of exchange, the funds, the copyright of a book, a professional practice, &c., as wealth.

Now, how is it possible to talk of the production, distribution, and consumption of bank notes, bills of exchange, the funds, a copyright, or a professional practice? But it is quite usual to buy and sell them.

J. B. Say has earnestly enforced the doctrine that abilities of all sorts are wealth. He terms them immaterial wealth.

How is it possible to talk of the production, distribution, and consumption of human abilities? But they have a value which is measured in money. It is quite usual to speak of the supply and demand of labour.

J. B. Say's work has for nearly half a century moulded the Continental view of political economy, and most of the usual manuals and treatises are little more than adaptations from it, with little variation.

Among others, M. Say has in a general way moulded the form of Mill's treatise, though no doubt he varies from him to a certain extent.

Mill treats political economy as the production, distribution, and exchange of wealth. Now, in the original language of the economists, that is simply exchange and exchange.

Mill's book, which, in a modified form, introduced Say's system into England, was published in 1848, and was immediately received with unbounded applause, and was supposed to have brought political economy to its highest pitch of perfection; and for many years it was considered to be as futile to criticise Mill as to criticise infallibility itself. Whatever Mill asserted was to be at once accepted without doubt or question.

Now, Mill is a professed writer on logic, and we should naturally expect that so distinguished a logician would at least be consistent with himself.

In an eloquent passage in his logic he shows the prime necessity of settling the fundamental concepts of a science. We might naturally expect, therefore, that he would take especial care to settle the definitions of economics, especially such a deeply-con-



tested one as wealth. After the very first paragraphs of his work it is, therefore, rather surprising to read, "Every one has a notion sufficiently correct for common purposes of what is meant by wealth;" and he says, "It is no part of the design of this treatise to aim at metaphysical nicety of definition where the ideas suggested by a term are already as determinate as practical purposes require."

Let us now see whether Mill himself has any clear idea of what wealth is. A little further on he says, "Everything forms, therefore, a part of wealth which has a power of purchasing." Here at last, after 2,100 years, we have exactly Aristotle's definition of wealth, which ancient writers held unanimously for 1,300 years—that everything which can be bought and sold, or whose value can be measured in money, is wealth. This definition manifestly includes all the three orders of exchangeable quantities: (1) material things; (2) personal qualities, both as labour and credit; and (3) abstract rights.

But at the end of the same remarks he says, "The production of wealth, the extraction of the instruments of human subsistence and enjoyment from the materials of the globe." Is not that a very startling change of conception? Is everything which can be bought and sold extracted from the materials of the globe? Are personal qualities, are bank notes, bills of exchange, personal credit, and banking credits extracted from the materials of the globe?

After going on for more than fifty pages, Mill comes to productive labour, which, he says, is labour productive of wealth; and then it suddenly strikes him that he has at last to inquire what wealth really is.

He then says that it "is essential to the idea of wealth to be susceptible of accumulation," and that permanence is necessary to wealth. Now, here is at once another change of idea, and it at once excludes labour from the term "wealth." Labour perishes in the very instant it is performed. We can accumulate the pro-

ducts of labour, but we cannot accumulate labour itself; or, at least, the only person who could probably accumulate labour itself would be the Philosopher of Laputa, who bottled sunshine.

When the idea of permanence is introduced into the notion of wealth it at once becomes altogether vague and uncertain. Things are of all degrees of permanence, from the land which lasts for ever to things of a constantly-diminishing degree of permanence, such as money, jewelry, houses, clothes, food, till we come to labour. At what degree of permanence is the line to be drawn between things that are wealth and those that are not wealth?

The *law of continuity* says, "That which is true up to the limit, is true at the limit;" which shows that labour, which has the least degree of permanence, must be included under the term wealth equally with land, which has the greatest degree of permanence.

We have now to examine more particularly Mill's doctrines upon credit.

He says that anything which has purchasing power is wealth.

He then says, "The amount of purchasing power which a man can exercise is composed of all the money in his possession or due to him (*i.e.*, any bills or notes he may have), and of all his *credit*."

"Credit, in short, has exactly the same purchasing power with money."

And many other passages to the same effect.

Now, if it be said that "everything which has purchasing power is wealth," and if it be said "credit is purchasing power," then the necessary inference is that "credit is wealth." That is a syllogism in which Mill is safely padlocked, and from which there is no escape.

Thus, by the clear admission of Mill, credit is wealth; and how is credit material, or extracted from the materials of the globe?

Now, there are numerous other self-contradictions in Mill as to the nature of wealth, but those which I have given are quite sufficient to show you that Mill himself had no clear ideas as to what wealth is.

I have now taken only one of the definitions of economics, but that the fundamental one, and shown you the self-contradictions of economists from Smith to Mill. And how can you expect a solid system of science to be founded on such self-contradictions? But there, in fact, 27 definitions in economics, and with respect to each one of them there is exactly the same self-contradiction and diversity of opinion.

No doubt the disciples of Smith have achieved a series of great successes, but these have been chiefly destructive, to sweep away what they considered mischievous laws; and everyone can agree upon that, but when it comes to a positive definite science the case is wholly different.

The fundamental defect of economists, from Smith to Mill, is that they profess to discuss wealth and the science of wealth. They consider the production, distribution, and so on of wealth, but they are unable to form a distinct and clear idea of what wealth is. Is it not surprising that writers who perfectly admit that personal credit, bills, and notes are wealth and capital in some places, in others allege that all wealth is the produce of land and labour, and extracted from the materials of the globe?

Some of the manuals in popular use begin by admitting that wealth is anything that is exchangeable, and then in a few sentences after they say that all wealth is the produce of land, labour, and capital. They themselves admit that labour itself is an exchangeable commodity. They admit that personal credit is wealth; and how is labour itself and how is personal credit the produce of land, labour, and capital?

There was a time when the physical sciences were exactly in the same state as economics is at present. They were simply a mass of confusion and contradictions. The wisest moral

philosopher of antiquity, seeing that all the professors of the physical sciences were at utter discord with themselves, called off his disciples in blank despair from the study of physical science, and bade them restrict themselves to moral science.

But if Socrates were to revisit the earth now, would he be of the same opinion, and how has physical science been brought to its present state of perfection? Simply by a careful settlement of its definitions, a diligent observation of facts, and a sedulous attention to bring language into harmony with nature, and economics can only be delivered from the present disrepute into which it has notoriously fallen, by strictly following the same methods by which the modern physical sciences have been created.

And I will cite the authority of Mill himself for this view. He says, very justly, "In the case of so complex an aggregation of particulars as are comprehended in anything which can be called a science, the definition we set out with is seldom that which a more extensive knowledge of the subject shows to be most appropriate. Until we know the particulars themselves, we cannot fix upon the most correct and compact mode of circumscribing them with a general definition.

"Scientific definitions, whether they are definitions of scientific terms or of common terms used in a scientific sense, are almost always of the kind last spoken of; their main purpose is to serve as the landmark of scientific classification. And since the classifications of any science are continually modified as scientific knowledge advances, the definitions of the sciences are constantly varying. . . . What is true of the definition of any term of science, is of course true of the definition of the science itself; and accordingly *the definition of a science must necessarily be progressive and provisional.*"

Is it possible to have anything more exactly appropriate to the present case. Those who still adhere to the definition of economics as the production, distribution, and consumption of wealth,

entirely forget that that definition was expressly restricted by its originators to the commerce of the material products of the earth and to those only. They expressly excluded labour and rights from the term wealth. They, therefore, only considered one class of economic quantities and only one kind of exchange.

But all modern economists now admit labour and rights to be wealth, in accordance with the unanimous doctrine of ancient writers, and the complete science treats of three orders of exchangeable quantities and six species of exchange.

The fact is that economics has burst the bonds of the physiocrate nomenclature—a definition which suits the exchange of material products only becomes unintelligible when it is stretched to include labour and rights. The attempt of economists to discuss these subjects while retaining the old definition was hopeless, and only led to confusion. It was like putting new wine into old bottles. The fundamental concepts of the physiocrates will no more fit economics in its present enlarged state than the clothes of an infant will fit a full-grown man. As economics now embraces all commerce, we must, in strict accordance with the above extract from Mill, entirely reject the narrow and restricted definition and adopt the enlarged one of commerce, which includes all exchanges. And when we do that it is like the transformation scene in a pantomime. Harmony, order, and science are evolved out of incomprehensible chaos as from the stroke of the enchanter's wand.

ON THE BEST NAME FOR THE SCIENCE.

Having then, I trust, satisfied you that there is a positive definite science of commerce or exchanges, we have next to determine what is the best name for it. The term "Political Economy" has undergone many changes of meaning since it was first invented. But at last, it having been appropriated in popular

use to the production, distribution, and consumption of wealth, and this expression having been shown to be equivalent to commerce or exchanges, a large body of economists have defined political economy as the science of exchanges. But there is a general dissatisfaction among economists with such a name, because it naturally suggests the idea that it has something to do with politics; whereas all economists are agreed that it is entirely independent of politics and forms of political government. Various other designations have been proposed. Whately proposed *Catallactics*. That, no doubt, exactly expresses its meaning. Others have proposed *Plutology* or *Chrematology*. Such names as these, however, would not be readily accepted, and it is not expedient to deviate too far from popular use. Economic science is so firmly rooted in the public mind that no advantage could be got by changing it. Moreover, it exactly expresses the nature of the science. Because *οἶκος* in Greek is absolutely synonymous with *πλοῦτος* and *χρῆμα*. It is sometimes supposed that *οἶκος* in Greek means a house, and that an economist is the master of a house. But *οἶκος* has a much more extensive meaning than that of a house only. Throughout the whole range of Greek literature, from Homer to Ammonius, *οἶκος* means property or estate of every description. It includes not only houses, lands, money, and all material things, but also all such property as debts, bank notes, bills of exchange, the funds, shares in commercial companies, copyrights, patents, &c. It is the technical term in Attic law for a person's whole property or estate of every description. The word "economy" is more usually appropriated to ideas of thrift or parsimony. I therefore proposed to term it *Economics*, which has a little peculiarity to distinguish it, and yet does not differ in any way from popular usage. And I am happy to say that this suggestion is now meeting with very general acceptance. Wherever you turn now the term economics meets your eye. Economics, then, is simply the science of exchanges, or commerce in its widest extent, and in all its forms and varieties. It is the theory of value.

I myself have offered this definition—*Economics is the science which treats of the laws which govern the relations of exchangeable quantities.*

And M. Michel Chevalier did me the honour to say that he thought that was the best definition which had yet been proposed.

I venture to hope, then, that this name will meet with your approbation, and that you will also adopt the name of economics for the science of commerce.

ECONOMICS IS A PHYSICAL SCIENCE.

We now, then, perceive how economics is a physical science. One of the most distinguished physical philosophers of the day expressed to me a doubt that economics is a physical science. But that all depends upon its fundamental conception and definition. So long as it was termed the "Production, Distribution, and Consumption of Wealth," there was nothing in the name or the nature of the subject to suggest any resemblance to a physical science; but as soon as we adopt the alternative and equivalent definition of the science as the science of commerce or exchanges, it is at once seen how it is a physical science, because there being *three* orders of exchangeable quantities, and therefore *six* species of exchanges, the object of the science is to discover the laws of the phenomena of these exchanges — that is, to determine the laws which govern their numerical relations of exchange. We have, in fact, a new order of variable quantities, and the laws which govern this new order of variable quantities must be in strict harmony with the laws which govern the relations of variable quantities in general. The laws which govern the variable relations of economic quantities must be in strict harmony with the laws which govern the varying relations of the stars in their courses. Like astronomy, economics is a pure science of ratios.

It is thus seen that economics is a distinct body of phenomena all based upon a single idea. Another great body of particulars is

won from the vague, floating, and uncertain mass of knowledge—won from the void and formless infinite—and fixed and circumscribed by a definition which separates it from all other bodies of phenomena, and is therefore fitted to form a great demonstrative science of the same rank as mechanics, astronomy, optics, or any other physical science.

Thus it is clearly seen to be a physical science; but it is also a moral science, because its laws are based upon the *mores*—the $\eta\theta\eta$ —of men. For we find that the same general laws of exchange or the principles of commerce hold good among all nations, among the rudest and the most civilised in all ages and countries. The laws of commerce are identically the same to-day as they were when commerce first sprang into being, and they will remain so to the end of time. The laws of commerce, said Edmund Burke, are the laws of Nature, and therefore the laws of God. That is why economics is a physical science, because it is based upon principles of human nature, which are as universal and as permanent as those upon which the physical substances are based. And therefore economics is a physical moral science, and the only moral science which is capable of being raised to the rank of an exact science.

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